IVS DVR

Installation Guide

- Intelligent Video Surveillance
- GUI Display with USB Mouse Control

Please read instructions thoroughly before operation and retain it for future reference.

For the actual display & operation, please refer to your DVR in hand.

IVS System

Intelligent Video Surveillance

Dear Customers,

Thank you for choosing this innovative IVS DVR, one series of IVS system products. From this moment, you are entering into a new era of security guard, and more convenient and surprising features are presented to suit your versatile needs.

IVS DVR series is integrated with the mobile technology to not only realize the instance of event notifications, but also increase the mobility of surveillance.

For powerful mobile surveillance support, our **self-developed mobile phone program, "EagleEyes", compatible on many popular mobile platforms, such as iPhone®, BlackBerry®, Nokia® Symbian®, Windows® Mobile & Android™**, is free to download from your mobile phone for remote access and device control.

In addition to mobile phones, remote access via different PC software is also widely supported:

- **For web browsers, Internet Explorer®, Mozilla® Firefox®, Safari® and Google Chrome™ are supported.**
- **Apple's media player, QuickTime®, is also one tool you can use.**

Above all, our powerful CMS software allows you to centrally manage multiple devices in one interface and control all situations.

To know more about IVS system and EagleEyes, and where to download EagleEyes, please visit:
http://www.eagleeyescctv.com

To know more about feature applications, please visit:
http://www.youtube.com/user/avtecheagleeyes#p/a

To check what's new about our products, please join:
http://www.eagleeyescctv.com/facebook

To seek for technical support, please contact:
support@avtech.com.tw

To give us your precious suggestions and comments, please contact:
marketing@avtech.com.tw

IMPORTANT SAFEGUARD

	CAUTION	
	RISK OF ELECTRIC SHOCK	

CAUTION:

To reduce the risk of electric shock, do not expose this apparatus to rain or moisture. Only operate this apparatus from the type of power source indicated on the label. The company shall not be liable for any damages arising out of any improper use, even if we have been advised of the possibility of such damages.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

All lead-free products offered by the company comply with the requirements of the European law on the Restriction of Hazardous Substances (RoHS) directive, which means our manufacture processes and products are strictly “lead-free” and without the hazardous substances cited in the directive.

The crossed-out wheeled bin mark symbolizes that within the European Union the product must be collected separately at the product end-of-life. This applies to your product and any peripherals marked with this symbol. Do not dispose of these products as unsorted municipal waste. Contact your local dealer for procedures for recycling this equipment.

This apparatus is manufactured to comply with the radio interference requirements.

Trademark Acknowledgements

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Disclaimer

The information in this manual was current when released. We reserve the right to revise or remove any content in this manual at any time. We do not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of this manual. For the actual display & operation, please refer to your DVR in hand. The content of this manual is subject to change without notice.

Grounding

This is a Safety Class 1 Product (provided with a protective earthing ground incorporated in the power cord). The mains plug shall only be inserted in a socket outlet provided with a protective earth contact. Any interruption of the protective conductor inside or outside of the instrument is likely to make the instrument dangerous. Intentional interruption is prohibited.

Water & Moisture

Do not expose this product to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the product.

MPEG4 Licensing

THIS PRODUCT IS LICENSED UNDER THE MPEG-4 VISUAL PATENT PORTFOLIO LICENSE FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER FOR (i) ENCODING VIDEO IN COMPLIANCE WITH THE MPEG-4 VISUAL STANDARD (“MPEG-4 VIDEO”) AND/OR (ii) DECODING MPEG-4 VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED BY MPEG LA TO PROVIDE MPEG-4 VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION INCLUDING THAT RELATING TO PROMOTIONAL INTERNAL AND COMMERCIAL USES AND LICENSING MAY BE OBTAINED FROM MPEG LA, LLC. SEE HTTP://WWW.MPEGLA.COM.

GPL Licensing

This product contains codes which are developed by Third-Party-Companies and which are subject to the GNU General Public License (“GPL”) or the GNU Lesser Public License (“LGPL”).

The GPL Code used in this product is released without warranty and is subject to the copyright of the corresponding author.

Further source codes which are subject to the GPL-licenses are available upon request.

We are pleased to provide our modifications to the Linux Kernel, as well as a few new commands, and some tools to get you into the code. The codes are provided on the FTP site, and please download them from the following site or you can refer to your distributor:

http://download.dvrtw.com.tw/GPL/076D_Series/arm-linux-2.6.tar.gz

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1. PRODUCT OVERVIEW

The IVS DVR series, Intelligent Video Surveillance, is featured in the following advantages:

■ Flow Counting

A virtual detection line is set to detect the moving direction of pedestrians for flow counting.

■ Virtual Fence / One-Way Pass

A virtual intruder detection line is set to detect intruders coming from the specified direction and cross the detection line.

■ Power Mobile Support

EagleEyes for Mobile Surveillance

Mobile surveillance via our self-developed and free program, "EagleEyes", is supported on many popular mobile platforms, such as iPhone, BlackBerry, Windows Mobile and Symbian.

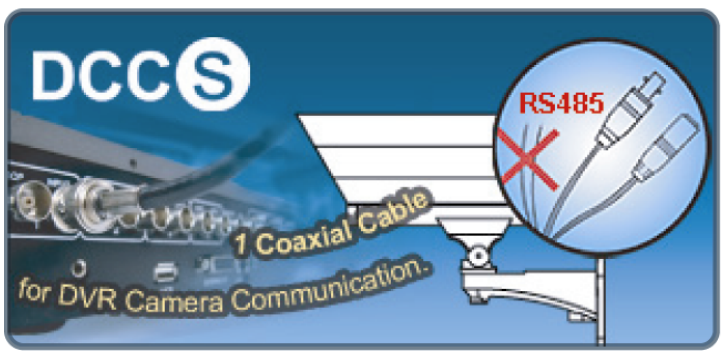
iPhone | BlackBerry | Symbian | Windows Mobile

iPhone Push Notification

When an event happens and is detected by our human detection camera, this IVS DVR will immediately send a instant notification (Push Notification) to your iPhone within five seconds. Once you confirm the receipt, the mobile surveillance software, EagleEyes, will be automatically activated for remote access.

■ DVR / Camera Communication System (DCCS) Technology

In this system, control signals can be transferred by coaxial cables directly to control PTZ cameras. In other words, installation will be highly simplified to lower labor cost and working hours.



2. CONNECTION AND SETUP

Before the DVR is powered on, make sure you have installed a hard disk, connected at least one camera and a monitor. For details, please refer to the following sections.

Note: The DVR is designed to automatically detect the video system of the connected cameras (NTSC or PAL). To make sure the system detection is correct, please check if the cameras are connected to the DVR and power-supplied before the DVR is powered on.

Note: The connection and setup described below are for DCCS devices only. For details about connecting cameras other than DCCS ones, please refer to the DVR user manual.

2.1 Prerequisites

- Make sure your cameras support the DCCS function. For details, please check with your distributor or installer.
- To ensure the signal transmission, the recommended distance between this DVR and cameras should not exceed 200 meters by using 3C2V coaxial cables (112 braids).

  However, different materials used in 3C2V coaxial cables with different connection distance may cause some effects for the availability and fluency of signal transmission.

  Therefore, please do the DCCS test as instructed in "2.9 Examining Signal Transmission" at page 5 when the connection is completed to ensure this system can work normally.
- It's not allowed to use a signal booster or modem to amplify signals and extend the connection distance.
- The DCCS function doesn't support the channel which is looped from a DCCS camera connected to the same DCCS DVR or to other DCCS DVR.

2.2 SATA HDD Installation

A SATA HDD must be installed before the DVR is powered on.

Note: It's recommended to clear all data in the hard disk when the DVR is powered on and the date & time are set correctly to ensure the recorded data are not mixed with other data previously saved in the same hard disk. For details, please refer to "2.7 Clear Hard Disk" at page 4.

- **For 16CH & 8CH Models**

Step1: Loose the screws on the upper cover and open the upper cover of the DVR.

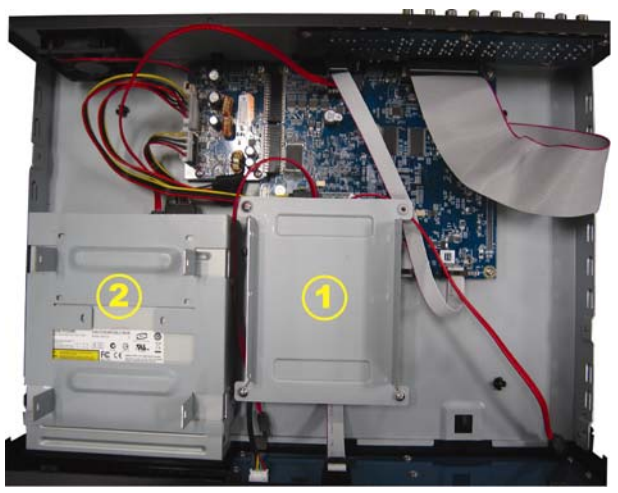
Note: The DVR cover is made of metal. Please be careful with its edge when you remove the cover.

Step2: There are two HDD brackets for this DVR as indicated on the right picture.

2-1 To install on the first bracket

Remove the bracket, and align the screw holes of the bracket with the HDD's screw holes. Make sure the PCB side of the HDD is facing up.

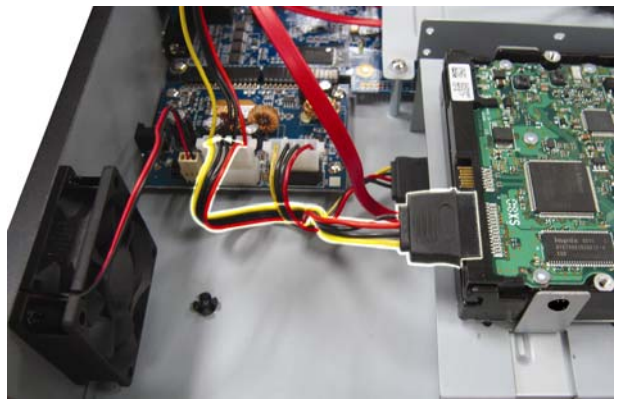
Fasten the HDD to the bracket, and connect the power connector and data bus connector to the HDD. Then, replace the bracket to DVR.



2-2 To install on the second bracket

Connect the power connector and data bus connector to the HDD.

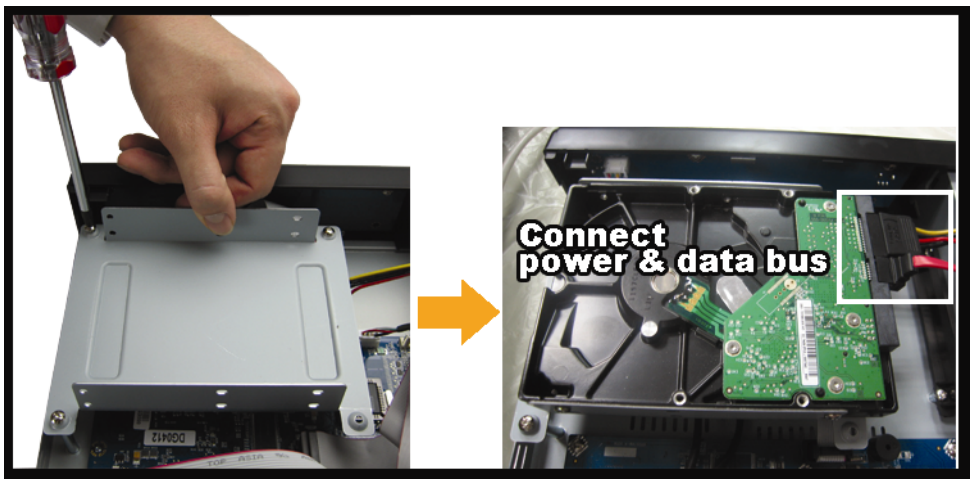
Align the screw holes of the bracket with the HDD's screw holes. Make sure the PCB side of the HDD is facing up. Then, fasten the HDD to the bracket.



Step3: Close the upper cover of the DVR, and fasten all the screws you loosened in Step1.

➢ **For 4CH Model**

Step1: Remove the screws on the top cover of DVR, and remove the top cover.
Step2: Remove the HDD bracket. Then, with the PCB side facing up, connect the compatible HDD to the power connector and data bus connector.
Step3: Put the compatible HDD in the bracket, and fasten it with the supplied screws, two for each side.
Step4: Replace the bracket back to the DVR.



Step5: Replace the top cover and fasten the screws you loosened in Step1.

2.3 Installing DCCS Camera

Install the camera on the wall or ceiling based on your installation environment and camera type. For installation details, please refer to the user manual of your camera.

Note: The distance between the camera and DVR needs to be within 200 meters for DCCS control to take effects. For details, please refer to "2.1 Prerequisites" at page 2.

2.4 Connecting DCCS Camera

The cameras must be connected and power-supplied before the DVR is powered on. Connect the camera with the indicated power supply. Then, connect the camera video output to the DVR video input port with a coaxial cable or RCA cable with BNC connectors.

Note: To ensure the DCCS camera works properly, connect it to the video channel which supports DCCS function:
For 16CH DVR: CH1 ~ CH4;
For 8CH DVR: CH1 ~ CH2;
For 4CH DVR: CH1.

1) Video cable connection

Connect the camera video output to the DVR video input port with a coaxial cable or RCA cable with BNC connector.

2) Power connection

Connect the camera with indicated power supply and make sure it's power-supplied.

2.5 DVR Power On

This device should be operated only with the type of power source indicated on the manufacturer's label. Connect the indicated AC power cord to the power adapter, and plug into an electrical outlet. The power LED will be on.

Note: Before the DVR is powered on, make sure (1) the cameras are connected and power-supplied for the detection of the camera video system to be correct, and (2) a monitor (either LCD or CRT monitor) is connected to the DVR for correct video output detection.

Note: To ensure that your DVR works constantly and properly, it's recommended to use an UPS, Uninterruptible Power Supply (Optional), for continuously operation.

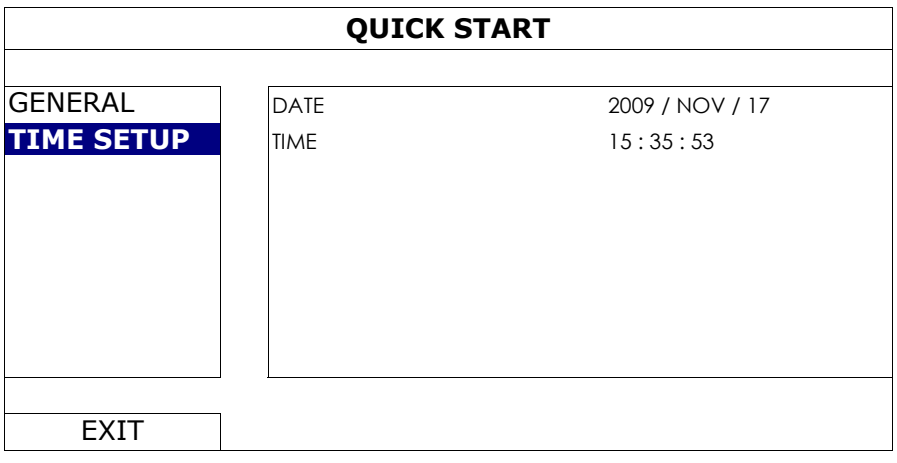
2.6 Date and Time Setting

Before operating your DVR, please set the date and time on your DVR **FIRST**.

Note: Please DO NOT change the date or time of your DVR after the recording function is activated. Otherwise, the recorded data will be disordered and you will not be able to find the recorded file to backup by time search. If users change the date or time accidentally when the recording function is activated, it's recommended to clear all HDD data, and start recording again.

Note: For the first time to use the DVR, please power it on for at least 48 hours continuously after the date & time is set correctly. It helps to prevent DVR time from resetting after the disconnecting of DVR power. If the DVR time resets after the disconnecting of DVR power, for example, caused by a power outage, the battery might run out and please replace the battery as described in "APPENDIX 6" in the DVR user manual.

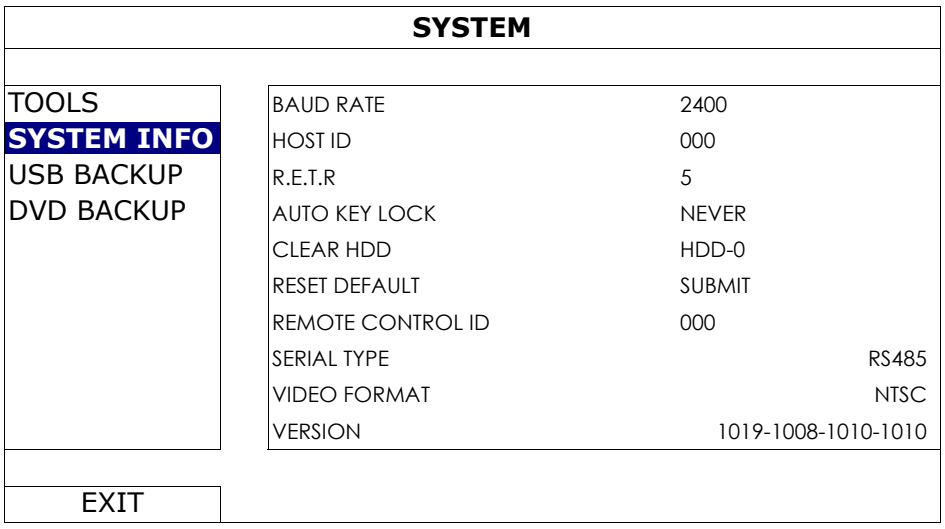
Right-click to enter the DVR password with the password keypad. The default administrator password is 0000. The status will be changed from (key lock) to (administrator). Then, right-click to show the main menu, and select "QUICK START" → "TIME SETUP" to set the date & time.



2.7 Clear Hard Disk

It's recommended to clear all data in the hard disk for the first time to user this DVR to ensure the recorded data are not mixed with other data previously saved in the same hard disk.

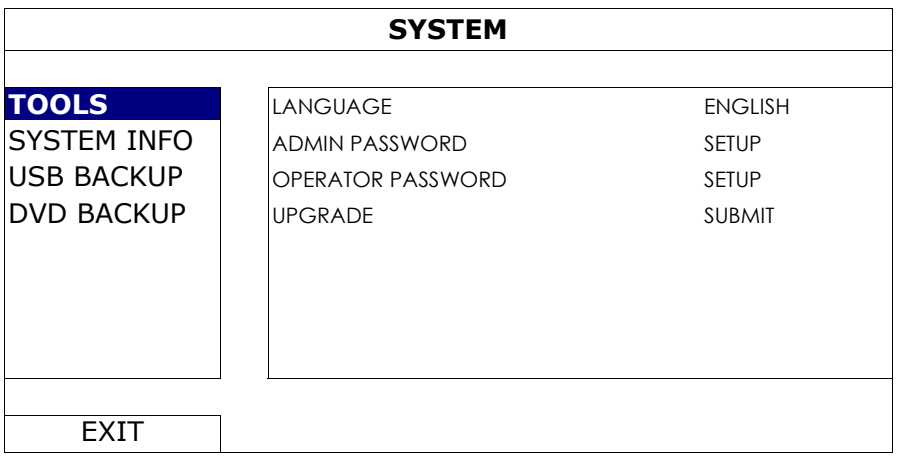
Right-click to show the main menu, and select "SYSTEM" → "SYSTEM INFO" → "CLEAR HDD". The DVR will reboot when HDD data are cleared. For details, please refer to "5.3.2 SYSTEM INFO" in the DVR user manual.



2.8 Password Setting

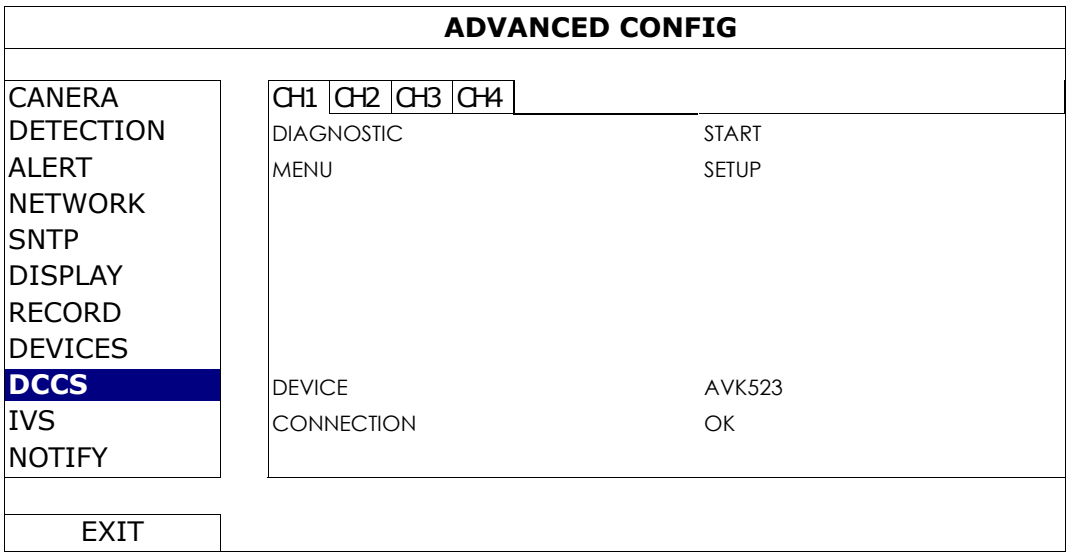
Right-click to show the main menu, and select “SYSTEM” → “TOOLS” to change the DVR password.

There are two user levels: ADMIN & OPERATOR. For details, please refer to “5.3.1 TOOLS” in the DVR user manual.



2.9 Examining Signal Transmission

Right-click to display the main menu, and select “ADVANCED CONFIG” → “DCCS”.



1) Make sure the model number of your DCCS camera is shown in “DEVICE”. If not, please check your camera connection.
2) Select the channel which connects to your DCCS camera, and click “START” in “DIAGNOSTIC” to examine the signal transmission between the DCCS camera and the DVR.

3) In “CONNECTION”, it shows the examining result for DCCS signal transmission between the DVR and camera. The message is as follows:

MESSAGE SHOWN	MEANING
CHECKING	The DVR is checking the DCCS signal transmission between the DVR and camera.
OK	The signal transmission is fine and the DCCS function works properly.
FAIL	The signal transmission is too weak or not available for the DCCS function to work properly.

2.10 Configuring DCCS Camera

DCCS cameras have three types: PTZ cameras, zoom lens control cameras, and human detection cameras. Based on the camera type, different camera settings are needed as described below.

Note: iPhone Push Notification is available only when a human detection camera is connected properly to the correct channel which supports DCCS. For iPhone Push Notification to work properly, please refer to “APPENDIX 2. SET IPHONE PUSH NOTIFICATION” at page 16.

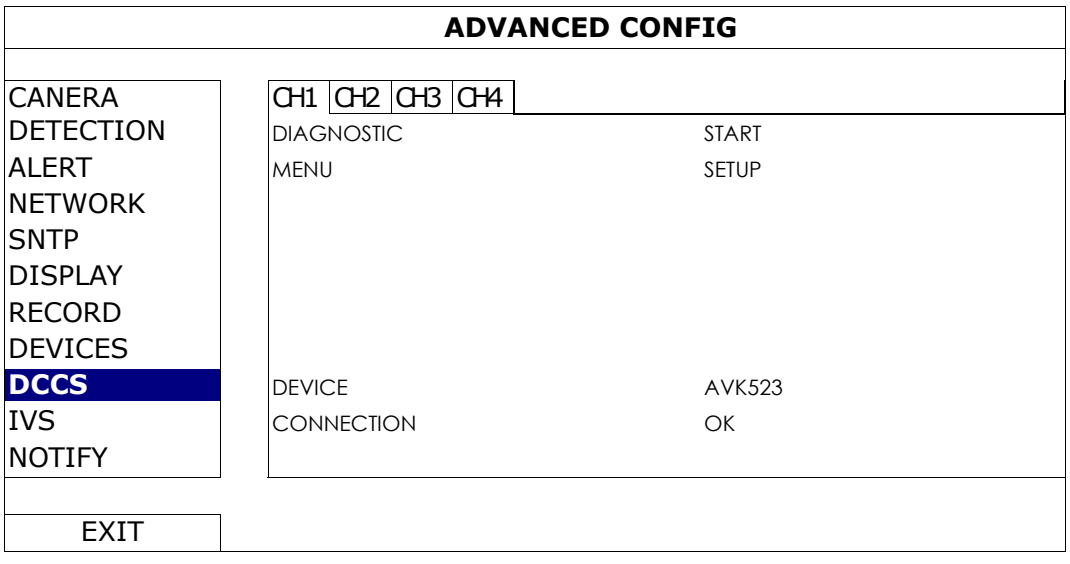
2.10.1 For a PTZ camera

Switch to the channel which connects to your PTZ camera, and click “ ” on the quick menu bar to display the PTZ control panel.

Configure the camera by clicking “ ”. For camera configuration details, please refer to its user manual.

2.10.2 For a zoom lens control camera

In the “DCCS” menu, move to the channel which connects to the zoom lens control camera, and click “SETUP” in “MENU”.



Different zoom lens control cameras might have different parameter settings. For details, please refer to their own user manuals.

3. GUI DISPLAY WITH USB MOUSE CONTROL

Note: Two sets of graphical OSD are designed for this DVR series, and you'll get one of them depending on the model you have. Below shows one set of graphical OSD as an example. To know details about the other set, please refer to "APPENDIX 1. GRAPHICAL OSD TABLE" at page 15.

3.1 Connect USB Mouse

Connect your USB mouse to one of the USB ports on the DVR front panel, and check if there's a mouse icon ( ) on the screen, indicating the USB mouse is detected properly.

Move your mouse to enter the DVR password with the password keypad. The default administrator password is **0000**. The status will be changed from (key lock) to (administrator), and the quick menu bar appears on the left side of the screen.

Note: There are two user levels for DVR access which can be set in the main menu "SYSTEM" → "TOOLS". For details, please refer to your user manual.

Password Input

Quick Menu: Close

3.2 Quick Menu Bar

Move to the arrow mark to extend the quick menu bar and show the five functions as follows:

Quick Menu: Open

CH	Click to show the channel switch panel and select the channel you want. For details, please refer to "3.2 Quick Menu Bar" in the user manual.
	Click to display the playback control panel, and click to play the latest recorded video clip, or click to enter the search list.
	Switch to the channel you want first, and click to enter the zoom-in mode. In this mode, click and drag the red frame on the bottom left of the screen to move to the place you want to see. To exit this mode, click ☒.
	Click to select the audio channel you want: In the live mode, only the live audio channels can be selected. In the playback mode, live and playback audio channels can be selected.
	Click to enter the PTZ mode and show the PTZ camera control panel.

3.3 Main Menu

Right-click anywhere on the screen to show the main menu as follows, and right-click again to exit.

Main Menu

	QUICK START	Click to set the status display, image settings, and date & time.
	DATE SETUP	Click to set the date display and daylight saving.
	SYSTEM	Click to set the system configurations.
	EVENT INFORMATION	Click to enter the event search menu.
	ADVANCED CONFIG	Click to set CAMERA, DETECTION, ALERT, NETWORK, SNTP, DISPLAY, RECORD, DEVICES, DCCS, IVS & NOTIFY.
	SCHEDULE SETTING	Click to set record timer and detection timer.

Main Menu Structure

	QUICK START	GENERAL	CHANNEL TITLE
			EVENT STATUS
			DATE DISPLAY
			IMAGE SIZE
			QUALITY
			IMAGE PER SECOND
		TIME SETUP	DATE
			TIME
	DATE SETUP	DATE INFO	DISPLAY DATE OF MODE
			FORMAT
		DAYLIGHT	DAYLIGHT SAVING
	SYSTEM	TOOLS	LANGUAGE
			ADMIN PASSWORD
			OPERATOR PASSWORD
			UPGRADE
		SYSTEM INFO	BAUD RATE
			HOST ID
			R.E.T.R.
			AUTO KEY LOCK
			CLEAR HDD
			RESET DEFAULT
			REMOTE CONTROL ID
			SERIAL TYPE
			VIDEO FORMAT
			VERSION
		USB BACKUP	
		DVD BACKUP *(Selected Models Only)*	
	EVENT INFORMATION	QUICK SEARCH	
		EVENT SEARCH	
		HDD INFO	
		EVENT LOG	

	ADVANCED CONFIG	CAMERA	BRIGHTNESS
			CONTRAST
			SATURATION
			HUE
			COV.
			REC
			CHANNEL TITLE
		DETECTION	LS
			SS
			TS
			DET
			ALARM
			AREA
		ALERT	EXT. ALERT
			INT. BUZZER
			KEY BUZZER
			VLOSS BUZZER
			MOTION BUZZER
			ALARM BUZZER
			HDD BUZZER
			ALARM DURATION (SEC)
			HDD NEARLY FULL (GB)
		NETWORK	
		SNTP	GMT
			NTP SERVER
			SYNC PERIOD
		DISPLAY	DE-INTERLACE *(Selected Models Only)*
			FULL SCREEN DURATION
			QUAD SCREEN DURATION *(Selected Models Only)*
			DWELL SCREEN DURATION
			VGA OUTPUT
			DISPLAY COVERT
			HDD DISPLAY MODE
			DISPLAY OUTPUT PATH
			ALPHA BLENDING
		RECORD	MANUAL RECORD ENABLE
			EVENT RECORD ENABLE
			TIMER RECORD ENABLE
			EVENT RECORD IPS
			TIMER RECORD IPS
			PRE-ALARM RECORD
			OVERWRITE
			EVENT RECORD ALL CHANNEL
			KEEP DATA LIMIT (DAYS)
		DEVICES	
		DCCS	
		IVS	CAMERA *(Selected Models Only)*
			IVS MODE
			DISPLAY LINE
			SENSITIVITY
			RESET COUNT
			VIRTUAL FENCE AREA
			SCENE CHANGE
			SCENE CHANGE SENSITIVITY
		NOTIFY	GUARD
	SCHEDULE SETTING	RECORD	
		DETECTION	

4. FRONT AND REAR PANELS

4.1 Front Panel

1) LED Indicators

⏻	DVR is powered on.	🕒	Timer recording is on.
HDD	HDD is reading or recording.	▷	Under playback status.
🔈	An alarm is triggered.		

2) CH1 ~ 16 / 1 ~ 8 / 1 ~ 4

Press the channel number buttons to select the channel to display.

3) SLOW

In the playback mode, press to show slow playback.

4) ZOOM

Press to enlarge the picture of selected channel in the FRAME or FIELD recording mode.

5) ⊞

Press to show the 4 channel display mode.

6) SEQ

Press to display each channel in full screen one by one starting from CH1. When the last channel is displayed, it will repeat from CH1 again. To exit this mode, press “SEQ” again.

7) LIST (Event List Search)

Press to quickly search the recorded files by event lists: RECORD / MOTION / ALARM / TIME / HUMAN DETECTION / IVS / STATISTIC, or select FULL LIST to show all the event logs.

To quickly search the time you want, select “QUICK SEARCH”. For details, please refer to “5.4.1 QUICK SEARCH” in the user manual.

8) SEARCH *(For Selected Models Only)*

Press to enter the time search menu. For details, please refer to “5.4.1 QUICK SEARCH” in the user manual.

9) MENU

Press “MENU” to enter the main menu.

10) ENTER

Press “ENTER” to confirm the setting.

11) ▶ (PLAY)

Press to playback the latest recorded data.

12) ⏸ (▲) / ■ (▼) / ⏪ (◄) / ⏩ (►)

Press ▲ / ▼ / ◄ / ► to move up / down / left / right.

In the playback mode:

Press “⏸” to pause playback.

Press “■” to stop playback.

Press “⏩“ to fast forward.

Press “⏪“ to fast rewind.

13) AUDIO (SLOW + ZOOM)

Press “SLOW” + “ZOOM” to select live or playback audio from audio channel 1~4.

🔊	Live audio from audio channel 1~4 (indicated in white).	🔊	Playback audio from audio channel 1~4 (indicated in yellow).
🔊	Audio channel unselected		

14) P.T.Z. (⊞ + SEQ)

Press “⊞” + “SEQ” at the same time to enter / exit the PTZ control mode.

15) ⏏ *(For Selected Models Only)*

Press "⏏" to open / close the DVD Writer.

16) USB port

There are two USB ports on the front panel, one for connecting your USB mouse for mouse control, and the other one for connecting your USB flash drive for video backup.

Note: It's not allowed to have two USB mice or two USB flash drives connected on the front panel.

For the compatible USB flash drive list, please refer to "APPENDIX 3" in the user manual.

4.2 Rear Panel

1) 75Ω / HI-IMPEDANCE *(For Selected Models Only)*

When using Loop function, please switch to HI-IMPEDANCE. When you don't use Loop function, please switch to 75Ω.

2) VIDEO IN (1 ~ 16 / 1 ~ 8 / 1 ~ 4): Connect to the video connector of a camera.
VIDEO LOOP (1 ~ 16 / 1 ~ 8): Video output connector.

Note: The DVR will automatically detect the video system of the camera, please make sure that the cameras are properly connected to the DVR and power-supplied before the DVR is turned on.

3) AUDIO IN (1~4)

Connect to the audio connector of a camera if the camera supports audio recording.

Note: To make a video backup with audio, make sure the camera which supports the audio function is connected to the video-in channel and audio-in channel. For example, the audio data from audio CH1 will be recorded with the video data from video CH1.

4) AUDIO OUT

Connect to a speaker with 1 mono audio output.

Note: To know how many audio outputs your DVR supports, please refer to its specifications.

5) MONITOR

Connect to a CRT monitor for video output.

Note: When both MONITOR and VGA are connected, press the left key ◄ on the DVR front panel during DVR power-on to force the video output via MONITOR. For details, please refer to "5.5 Video Output Switch".

6) CALL

Connect to a monitor specific for sequence display.

7) VGA

Connect to a LCD monitor directly.

Note: When both MONITOR and VGA are connected, press the right key ► on the DVR front panel during DVR power-on to force the video output via VGA. For details, please refer to "5.5 Video Output Switch".

8) IR

Connect the IR receiver extension line for remote control.

9) EXTERNAL I/O

This port is used to connect external devices (such as speed dome cameras or external alarm, etc).
For detailed I/O port PIN configuration, please refer to "APPENDIX 6" in your user manual.

10) LAN

Connect to Internet by LAN cable.

11) DC 19V

Connect to the supplied adapter.

12) ⏻ Power Switch

Switch to "**I**" to turn on the power, and "O" to turn off the power.

5. BASIC OPERATION

5.1 Live Page

Icon	Function	Icon	Function	Icon	Function
	Live audio channel (1~4)		Playback audio channel (1~4)		Audio channel off
	Digital zoom on		Digital zoom off		Timer recording
	Network disconnected		Internet connected		LAN connected
	USB mouse connected		USB flash drive / device connected		No USB device connected
	Key lock		PTZ mode on		HDD overwrite
	Administrator		Operator		Sequence
	Recording		Alarm event		Motion event
	Virtual fence event		One way pass event		Scene Change event
	Human detection event		Flow counting enabled		Smart zoom

5.2 Record Icon

1) Manual Recording

By defaults, manual recording is on ( ) when the DVR is powered on and a HDD is installed.

2) Event Recording

The event icons, / / / / / , show on the screen when their respective events occur and the related record function is on.

3) Timer Recording

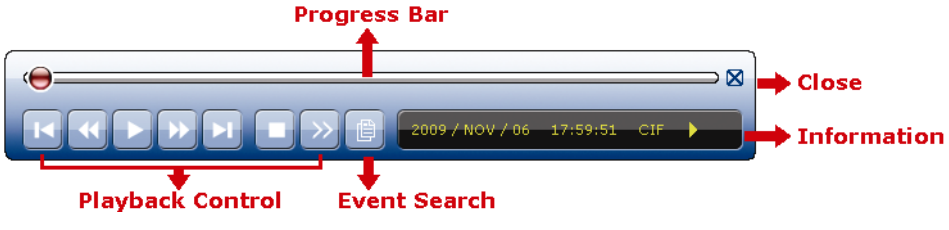
When timer recording is on, you will see " " on the screen.

4) HDD Overwritten

Be defaults, the HDD overwritten function is set to ON, and " " will be shown on the screen.

5.3 Playback

Click " " on the quick menu bar to display the playback control panel, and click to play the latest recorded video clip, or click to enter the search list.



Note: There must be at least 8192 images of recorded data for playback to work properly. If not, the device will stop playback. For example, if the IPS is set to 30, the recording time should be at least 273 seconds (8192 images / 30 IPS) for the playback to work properly.

Note: During playback, the image size of the recording (FRAME, FIELD or CIF) will be shown on the screen.

Playback Control

	Fast Forward	Increase the speed for fast forward. Click once to get 4X speed forward and click twice to get 8X speed, etc., and the maximum speed is 32X.
	Fast Rewind	Increase the speed for fast rewind. Click once to get 4X speed rewind and click twice to get 8X speed, etc., and the maximum speed is 32X.
/	Play / Pause	Click to play the latest recorded video clip immediately, and click again to pause. In the pause mode, click once to get one frame forward, and click to get one frame rewind.
	Stop	Click to stop the video playback.
	Slow Playback	Click once to get 1/4X speed playback, and click twice to get 1/8X speed playback.
/	Previous / Next Hour	Click to jump to the next / previous time interval in an hour, for example, 11:00 ~ 12:00 or 14:00 ~ 15:00, and start playing the earliest event video clip recorded during this whole hour.

Event Search

Click to quickly search the recorded files by event lists: RECORD / MOTION / ALARM / TIME / HUMAN DETECTION / IVS / STATISTIC, or select FULL LIST to show all the event logs.

To quickly search the time you want, select “QUICK SEARCH”. For details, please refer to “5.4.1 QUICK SEARCH” in the user manual.

Audio Playback

In the playback mode, click on the quick menu bar as many times as needed to select live or playback audio from audio channel 1~4.

Live audio from audio channel 1~4 (indicated in white).

Playback audio from audio channel 1~4 (indicated in yellow).

Audio channel unselected

Note: To make a video backup with audio, make sure the camera which supports the audio function is connected to the video-in channel and audio-in channel. For example, the audio data from audio CH1 will be recorded with the video data from video CH1.

5.4 User Level Switch

In the key lock mode (), move your USB mouse to display the password input keypad. There are two user levels for accessing the DVR: Administrator () & Operator ().

When the administrator password is entered, will be shown on the status bar of the screen and all operations are allowed. The default administrator password is 0000.

When the operator password is entered, will be shown on the status bar of the screen, and the main menu is **NOT** allowed to access. The operator user level needs to be set in the main menu “SYSTEM” → “TOOLS”.

To switch between these two user levels, click the current user level icon to switch to the key lock mode, and

move your mouse to show the password input keypad, and enter the password of the user level you want.

5.5 Video Output Switch

It's not allowed to have video output simultaneously on a CRT monitor (connected to MONITOR) and LCD monitor (connected to VGA).

The default video output setting is "AUTO", meaning the DVR will automatically detect the video output source. When VGA and MONITOR are both connected, the default monitor output is VGA.

To change the video output setting manually:

- To force the video output via MONITOR, press the left key ◄ on the DVR front panel at DVR power-on.
- To force the video output via VGA, press the right key ► on the DVR front panel at DVR power-on.

The setting is changed when you hear a short beep sound.

OR:

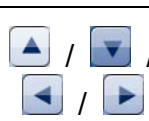
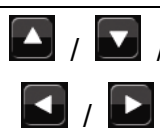
When the DVR is powered on and initialized, right-click to show the main menu, and select "ADVANCED CONFIG" → "DISPLAY" → "DISPLAY OUTPUT PATH".

Select "VGA" to switch to the connected LCD monitor, or "COMPOSITE" to switch to the connected CRT monitor. The DVR will then reboot for the change to take effect.

ADVANCED CONFIG

CAMERA	DE-INTERLACE *(For Selected Models Only)*	OFF
DETECTION	FULL SCREEN DURATION	03
ALERT	QUAD SCREEN DURATION *(For Selected Models Only)*	03
NETWORK	DWELL SCREEN DURATION	03
SNTP	DISPLAY COVERT	ON
DISPLAY	HDD DISPLAY MODE	HDD SIZE
RECORD	DISPLAY OUTPUT PATH	AUTO
DEVICES	ALPHA BLENDING	200
DCCS		
IVS		
NOTIFY		
EDIT		

APPENDIX 1. GRAPHICAL OSD TABLE

	Icon		Click to go to…
	OSD 1	OSD 2	
Main Menu			Quick Start
			Date Setup
			System
			Event Information
			ADVANCED CONFIG
			Schedule Setting
Quick Menu Bar			Channel Switch
			Playback Control
			Digital Zoom
			Audio
			PTZ Control
Playback Control			Fast Forward
			Fast Rewind
			Play / Pause
			Stop
			Slow Playback
			Previous / Next Hour
PTZ Control			Camera Menu
			Enter
			Up / Down / Left / Right
			Zoom in / out max
			Zoom in / out
			Focus near / far
			Auto mode
			Preset point

APPENDIX 2. SET IPHONE PUSH NOTIFICATION

This IVS DVR series supports instant event notifications to your iPhone with our self-developed program, “EagleEyes”, installed. When a man is detected by a human detection camera, the DVR will immediately receive alarm signals and send to your iPhone.

Note: iPhone is the registered trademark of Apple Inc.

Note: EagleEyes is a powerful mobile surveillance program developed by AV TECH Corporation. For more operations details about EagleEyes, please visit http://www.eagleeyescctv.com.
For any comment or question about this program, please send to marketing@avtech.com.tw. Your feedback is always welcomed.

You need to finish some settings in your iPhone for this function to work properly. For details, please refer to “A2.2.2 Program Setup” at page 17.

A2.1 Prerequisite

Before setting this function, make sure you have checked the following:

- ✓ You have an iPhone with our self-developed program, “EagleEyes”, installed. For details, please refer to “A2.2.1 Program Download” at page 16.
- ✓ A human detection camera is connected to the DVR video channel which supports DCCS function:
  For 16CH DVR: CH1 ~ CH4
  For 8CH DVR: CH1 ~ CH2
  For 4CH DVR: CH1
- ✓ The event record function of your IVS DVR is not disabled.
- ✓ The motion detection function of your IVS DVR is not disabled.
- ✓ Your IVS DVR is connected to Internet. For details, please refer to http://www.surveillance-download.com/user/CMS.pdf.

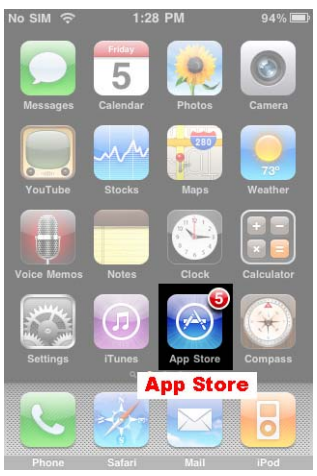
A2.2 Set iPhone

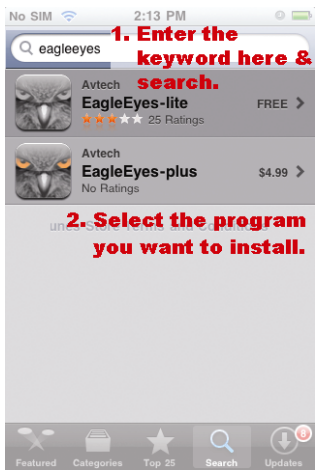
A2.2.1 Program Download

STEP1: Go to “App Store” via your iPhone.

STEP2: Search the program with the keyword “eagleeyes”.

Note: You might be charged for Internet access via wireless or 3G networks. For the Internet access rate details, please check with your local network operator or service provider.





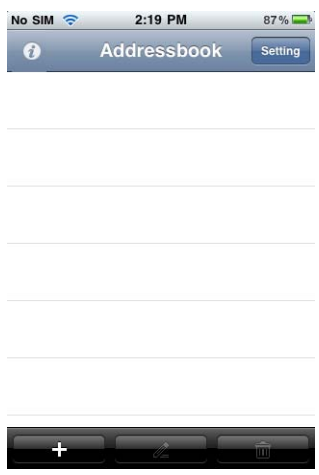
STEP3: Read the introduction of the program if needed, and select “INSTALLED” to start the installation.

Follow the on-screen instructions to download and install the program. “ ” will be shown on the iPhone desktop for quick access when the program is installed successfully.

No SIM
2:15 PM
Search
Info
EagleEyes-lite
Avtech
25 Ratings
INSTALL
3. Select
"INSTALL"
What is AVTECH EagleEyes-lite ?
AVTECH EagleEyes-lite is a free valued customer of AVTECH Corporation only.
EagleEyes-lite is very easy and convenient to use, powerful feature with user friendly interface design.
Function description:
1. Real-time live video streaming remote monitor IP-Camera and DVR Device(AVTECH product only).
2. Support DVR single, Multi-channel monitor swithing.
3. Support TCP-IP protocol.
4. Auto Re-login function after disconnect.
5. Support video type such as: MPEG4, H.264 for DVR/IPCAM.
6. Support PTZ Control (Normal / Pelco-D / Pelco-P)
Featured
Categories
Top 25
Search
Updates

A2.2.2 Program Setup

Step1: Select “EagleEyes” to enter “Addressbook”, and select “+” at the bottom left corner to enter the device IP address setting page.



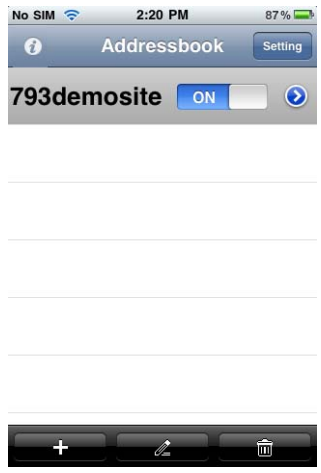
Step2: Give a meaningful title to this IP setting, and enter the IP information needed to access this IVS DVR.

Step3: Make sure all the information is correct, and select “Save” on the top right corner to save your setting and return to the address book page.

Column	Description
Required Column:	
Title	Give a meaningful title to this IP setting.
IP Address / Port	Enter the IP address and port number used to access this DVR remotely.
Username / Password	Enter the user name and password used to access this DVR remotely. The default user name and password are both “admin”.
Get Type	Click this button to detect the device type based on the IP data entered in the previous columns, allowing users to check whether the device they want to connect is the right device, and allowing the system to enable the functions and settings the device supports.
Optional Column:	
Audio	Click “>” to select the audio channel you want, and slide to enable or disable the audio function.

Column	Description
	Note: Before using this function, check whether the camera connected to this DVR supports audio transmission and the connection is correct. For details, please refer to the DVR user manual.
Format	Select the network transmission format.
Quality	Click “>” to select the image quality from Best, High, Normal or Basic.

Step4: To check whether your configurations are correct, select “>” to immediately access the DVR you just added. You should be able to see the live view of the DVR.

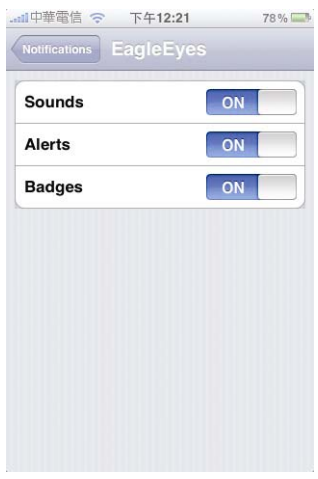


A2.2.3 Push Notification On

Step1: In the iPhone main menu, select “Settings” → “Notifications”.

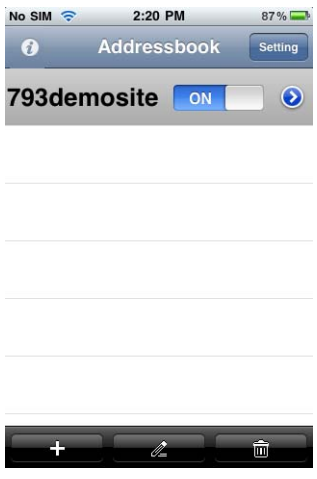
-- Make sure “Notifications” is set to “ON”.

-- Select “EagleEyes”, and make sure its settings are set to “ON”.



Step2: Then, return to the iPhone main menu, and select “EagleEyes” to enter the address book.

Select the title you just added, and make sure the button is set to “ON” to enable the Push Notification support of this IVS DVR.



Step3: Try to trigger the human detection alarm and see if you will be notified.

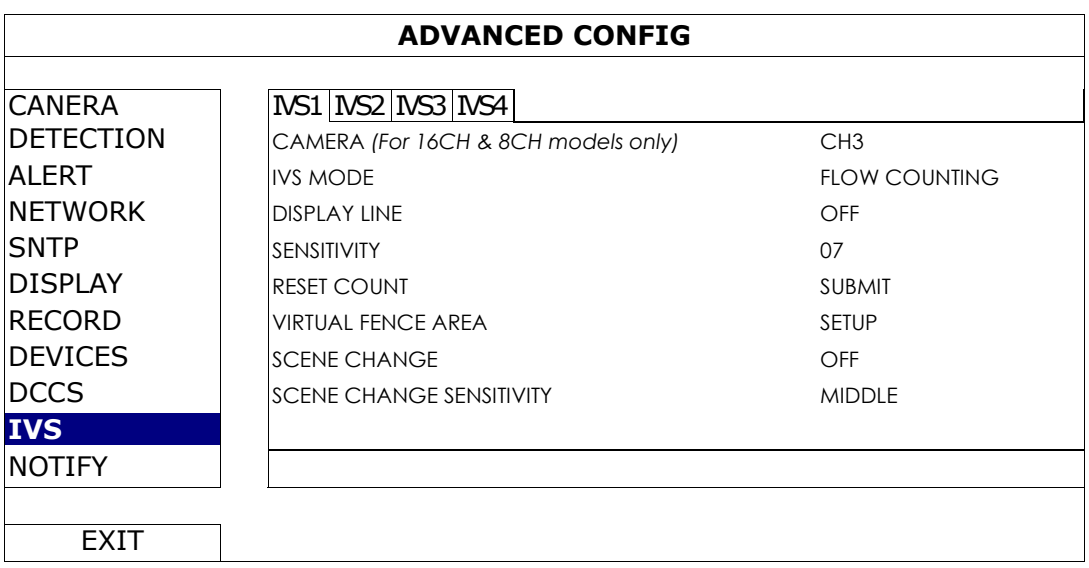
APPENDIX 3. SET FLOW COUNTING / VIRTUAL FENCE / ONE-WAY

Note: Before using the IVS function, make sure the event record function is enabled on your DVR.

IVS, Intelligent Video Surveillance, is the advanced application for motion detection, but more precise and smarter. It can be applied to different situations with one of the following three modes: FLOW COUNTING, VIRTUAL FENCE, and ONE WAY.

Note: Four camera channels are supported for this function. For 16CH and 8CH models, users are allowed to select four camera channels randomly to use this function; for 4CH models, all the four camera channels are supported.

Right click to show the main menu, and select " " → "ADVANCED CONFIG" → "IVS".



1) CAMERA *(For 16CH & 8CH models only)*

Select the camera channel that you want to use the IVS function.

2) IVS MODE

Select one of the following three modes depending on your environment:

MODE	DESCRIPTION
FLOW COUNTING	A virtual detection line is set to detect the moving direction of pedestrians for flow counting.
VIRTUAL FENCE	A virtual detection line is set to detect intruders crossing the detection line, and an alarm will be triggered.
ONE WAY	A virtual detection line is set to detect intruders from the specified direction, and an alarm will be triggered.

3) DISPLAY LINE

Select to display the detection line for IVS on the screen or not.

4) SENSITIVITY

Set the sensitivity for IVS from 00 ~ 15. The larger the value, the more sensitive the IVS will be.

5) RESET COUNT

Click "SUBMIT" to reset the flow counting number to 0 when the IVS mode is set to "FLOW COUNTING" and activated.

6) VIRTUAL FENCE AREA

Click "SETUP" to draw the detection line for IVS, and set the detection direction from left to right, or right to left. This area setting is the detection base for IVS MODE.

Note: There are some tips to draw the detection line. For details, please check www.surveillance-download.com/user/IVS_setup.pdf.

7) SCENE CHANGE

Select “ON” to trigger a motion event when the camera is sensed to be moved and the camera scene is changed. At the same time, the icon “ ” will be also shown on the screen in addition to the motion icon “ ”.

8) SCENE CHANGE SENSITIVITY

Set the detection sensitivity for “SCENE CHANGE” to “HIGH”, “MIDDLE” or “LOW”.

A3.1 IVS APPLICATION

A3.1.1 FLOW COUNTING

Step1: Go to “VIRTUAL FENCE AREA” to draw a detection line with your mouse, and decide the detection direction by selecting “REVERSE”.

Step2: Finish the IVS setting and return to the live view. The IVS icon “ ” will be shown on the status bar. Click it to show the flow counting panel as follows.
When anyone walks across the detection line, the system will determine his movement is in or out, and add one count to the corresponding channel on the flow counting panel.

IN	People coming from the opposite direction to the arrow mark.
OUT	People coming from the same direction as the arrow mark.

A3.1.2 VIRTUAL FENCE and ONE WAY

Step1: Go to “VIRTUAL FENCE AREA” to draw a detection line with your mouse, and decide the detection direction by selecting “REVERSE”.

Step2: Finish the IVS setting and return to the live view.

When anyone walks across the detection line, the system will determine his movement is in or out, and:

VIRTUAL FENCE	An event happens for anyone walking across the detection line, and “” will be shown on the screen.
ONE WAY	An event happens for anyone walking from the opposite direction to the arrow mark, and “” will be shown on the screen.

A3.2 IVS STATISTICS

Click “” → “” to enter the event search menu. Then, select “STATISTIC”

LIST		
QUICK SEARCH	CHANNEL	☑ 01 ☐ 02 ☐ 03 ☐ 04
RECORD	EVENT TYPE	☑ INFLOW
MOTION		☐ OUTFLOW
ALARM		☐ VIRTUAL FENCE
TIME		☐ ONE WAY
HUMAN DETECTION		☐ HUMAN DETECTION
IVS		☐ MOTION
FULL		☐ ALARM
STATISTIC	HARD DISK	ALL HDD
	TIME	2010/MAY/17
	STATISTIC	SUBMIT
EXIT		

Set all the criteria you want to search, and click “SUBMIT” in “STATISTIC” to show the event statistics by DAY in LIST (default) or CHART.

- To check the statistics in the bar chart, click “CHART”.
- To switch to the MONTH or YEAR view, click “DAY” at the bottom.

IVS STATISTIC			
LIST	CHART		▲
HOUR		COUNT	
00:00 – 00:59		0	
01:00 – 01:59		0	
02:00 – 02:59		0	
03:00 – 03:59		0	
04:00 – 04:59		0	
05:00 – 05:59		0	
06:00 – 06:59		0	
07:00 – 07:59		0	
08:00 – 08:59		3	
09:00 – 09:59		9	▼
2010/MAY/17		DAY	EXIT